

This listing of claims replaces all prior versions, and listings of claims in the instant application:

Listing of Claims:

1. (Previously Presented) A method for enrolling for receipt of one or more obfuscated application programs, the method comprising:

issuing, from a user device to an application program provider, an enrollment request comprising a target ID, said enrollment request for receipt of one or more obfuscated executable application programs controlled by said application program provider, said target ID specifying said user device configured to execute said one or more obfuscated executable application programs for one or more services;

obtaining, on said user device from said application program provider, a secret in response to said issuing;

associating, on said user device, said secret with said application program provider, said secret for use in executing said one or more obfuscated executable application programs; and

receiving, from said application program provider following said obtaining, said one or more obfuscated executable application programs,

wherein said user device comprises a smart-card and said smart-card comprises a virtual machine (VM); and

said target ID comprises a VM ID.

2. (Cancelled)

3. (Previously Presented) A method for enrolling for receipt of one or more obfuscated application programs, the method comprising:

receiving an enrollment request, by an application program provider from a user device, comprising a target ID, said enrollment request for receipt of one or more obfuscated application programs, said target ID specifying said user device, said user device configured to execute said one or more obfuscated application programs;

determining, by said application program provider, a secret in response to said request;

associating, by said application program provider, said secret with said target ID following said determining and authentication of said enrollment request; and

transferring said secret from said application provider to said user device,

wherein said user device comprises a smart-card and said smart-card comprises a virtual machine (VM); and

said target ID comprises a VM ID.

4. (Original) The method of claim 3 wherein said determining and said transferring form part of a key exchange protocol.

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Currently Amended) A method for application program obfuscation, the method comprising:

determining, by an application program provider, a current obfuscation method based at least in part on a target ID, said target ID specifying a user device configured to execute said obfuscated application program;
creating, by said application program provider, an obfuscated application program based at least in part on said current obfuscation method; and
sending said obfuscated application program from said application program ~~provider~~provider to said user device,
wherein said user device comprises a smart-card and said smart-card comprises a virtual machine (VM);
and
said target ID comprises a VM ID.

9. (Original) The method of claim 8, further comprising receiving an application program request from said user device, said determining occurring in response to said receiving.

10. (Original) The method of claim 8 wherein
said method further comprises, after said creating, applying a cryptographic process to said obfuscated application program together with a cryptographic key to create an encrypted obfuscated application program; and
said sending comprises sending said encrypted obfuscated application program.

11. (Cancelled)

12. (Previously Presented) A program storage device readable by a machine, embodying a program of instructions executable by the machine to perform a method for enrolling for receipt of one or more obfuscated application programs, the method comprising:

issuing, from a user device to an application program provider, an enrollment request comprising a target ID, said enrollment request for receipt of one or more obfuscated executable application programs controlled by said application program provider, said target ID specifying said user device configured to execute said one or more obfuscated executable application programs for one or more services;

obtaining, on said user device from said application program provider, a secret in response to said issuing;

associating, on said user device, said secret with said application program provider, said secret for use in executing said one or more obfuscated executable application programs; and

receiving, from said application program provider following said obtaining, said one or more obfuscated executable application programs,

wherein said user device comprises a smart-card and said smart-card comprises a virtual machine (VM); and

said target ID comprises a VM ID.

13. (Cancelled)

14. (Previously Presented) A program storage device readable by a machine, embodying a program of instructions executable by the machine to perform a method for enrolling for receipt of one or more obfuscated application programs, the method comprising:

receiving an enrollment request, by an application program provider from a user device, comprising a target ID, said enrollment request for receipt of one or more obfuscated application programs, said target ID specifying

said user device, said user device configured to execute
said one or more obfuscated application programs;
determining, by said application program provider, a
secret in response to said request;
associating, by said application program provider,
said secret with said target ID following said determining
and authentication of said enrollment request; and
transferring said secret from said application
provider to said user device,
wherein said user device comprises a smart-card
and said smart-card comprises a virtual machine (VM);
and
said target ID comprises a VM ID

15. (Original) The program storage device of claim 14
wherein said determining and said transferring form part of a
key exchange protocol.

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Currently Amended) A program storage device
readable by a machine, embodying a program of instructions
executable by the machine to perform a method for application
program obfuscation, the method comprising:

determining, by an application program provider, a
current obfuscation method based at least in part on a
target ID, said target ID specifying a user device
configured to execute said obfuscated application program;

creating, by said application program provider, an obfuscated application program based at least in part on said current obfuscation method; and

sending said obfuscated application program from said application program ~~provider~~provider to said user device,

wherein said user device comprises a smart-card and said smart-card comprises a virtual machine (VM); and

said target ID comprises a VM ID.

20. (Original) The program storage device of claim 19, said method further comprising receiving an application program request from said user device, said determining occurring in response to said receiving.

21. (Original) The program storage device of claim 19 wherein

said method further comprises, after said creating, applying a cryptographic process to said obfuscated application program together with a cryptographic key to create an encrypted obfuscated application program; and

said sending comprises sending said encrypted obfuscated application program.

22. (Cancelled)

23. (Currently Amended) An apparatus for enrolling for receipt of one or more obfuscated application programs, the method comprising:

means for issuing, from a user device to an application program provider, an enrollment request comprising a target ID, said enrollment request for receipt of one or more obfuscated executable application programs controlled by said application program provider,

said target ID specifying said user device configured to execute said one or more obfuscated executable application programs for one or more services;

means for obtaining, on said user device from said application program provider, a secret in response to said issuing;

means for associating, on said user device, said secret with said application program provider, said secret for use in executing said one or more obfuscated executable application programs; and

means for receiving, from said application program provider following said obtaining, said one or more obfuscated executable application programs,

wherein said user device comprises a smart-card and said smart-card comprises a virtual machine (VM); and

said target ID comprises a VM ID.

24. (Cancelled)

25. (Previously Presented) An apparatus for enrolling for receipt of one or more obfuscated application programs, the apparatus comprising:

means for receiving an enrollment request, by an application program provider from a user device, comprising a target ID, said enrollment request for receipt of one or more obfuscated application programs, said target ID specifying said user device, said user device configured to execute said one or more obfuscated application programs;

means for determining, by said application program provider, a secret in response to said request;

means for associating, by said application program provider, said secret with said target ID following said

determining and authentication of said enrollment request;
and

means for transferring said secret from said
application provider to said user device,

wherein said user device comprises a smart-card
and said smart-card comprises a virtual machine (VM);
and

said target ID comprises a VM ID.

26. (Original) The apparatus of claim 25 wherein said
determining and said transferring form part of a key exchange
protocol.

27. (Cancelled)

28. (Cancelled)

29. (Cancelled)

30. (Currently Amended) An apparatus for application
program obfuscation, the apparatus comprising:

means for determining, by an application program
provider, a current obfuscation method based at least in
part on a target ID, said target ID specifying a user
device configured to execute said obfuscated application
program;

means for creating, by said application program
provider, an obfuscated application program based at least
in part on said current obfuscation method; and

means for sending said obfuscated application program
from said application program ~~provider~~provider to said
user device,

wherein said user device comprises a smart-card
and said smart-card comprises a virtual machine (VM);
and

said target ID comprises a VM ID.

31. (Original) The apparatus of claim 30, further comprising means for receiving an application program request from said user device, said determining occurring in response to said receiving.

32. (Original) The apparatus of claim 30 wherein said apparatus further comprises means for applying a cryptographic process to said obfuscated application program together with a cryptographic key to create an encrypted obfuscated application program, said means for applying responsive to said creating; and
said means for sending comprises means for sending said encrypted obfuscated application program.

33. (Cancelled)

34. (Previously Presented) An apparatus for enrolling for receipt of one or more obfuscated application programs, the apparatus comprising a deobfuscator configured to:

issue an enrollment request comprising a target ID, said enrollment request for receipt of one or more obfuscated executable application programs controlled by an application program provider, said target ID specifying a user device configured to execute said one or more obfuscated executable application programs;

obtain a secret in response to said issuing; and

associate said secret with said application program provider, said secret for use in executing said one or more obfuscated executable application programs; and

receive, from said application program provider following said obtaining, said one or more obfuscated executable application programs,

wherein said user device comprises a smart-card and said smart-card comprises a virtual machine (VM); and

said target ID comprises a VM ID.

35. (Cancelled)

36. (Previously Presented) An apparatus for enrolling for receipt of one or more obfuscated application programs, the apparatus comprising an obfuscator configured to:

receive an enrollment request, from a user device, comprising a target ID, said enrollment request for receipt of one or more obfuscated application programs, said target ID specifying said user device, said user device configured to execute said one or more obfuscated application programs;

determine a secret in response to said request; associate said secret with said target ID following said determining and authentication of said enrollment request; and

transfer said secret to said user device,

wherein said user device comprises a smart-card and said smart-card comprises a virtual machine (VM); and

said target ID comprises a VM ID.

37. (Original) The apparatus of claim 36 wherein said determining and said transferring form part of a key exchange protocol.

38. (Cancelled)

39. (Cancelled)

40. (Cancelled)

41. (Previously Presented) An apparatus for application program obfuscation, the apparatus comprising an obfuscator configured to:

determine a current obfuscation method based at least in part on a target ID, said target ID specifying a user device configured to execute said obfuscated application program;

create an obfuscated application program based at least in part on said current obfuscation method; and

send said obfuscated application program to said user device,

wherein said user device comprises a smart-card and said smart-card comprises a virtual machine (VM); and

said target ID comprises a VM ID.

42. (Original) The apparatus of claim 41, said obfuscator further configured to receive an application program request from said user device and perform said determining in response to said receiving.

43. (Original) The apparatus of claim 41 wherein said obfuscator is further configured to apply a cryptographic process to said obfuscated application program together with a cryptographic key to create an encrypted obfuscated application program; and

said obfuscator is further configured to send said encrypted obfuscated application program.

44. (Cancelled)

45. (Cancelled)

46. (Cancelled)

47. (Cancelled)

48. (Cancelled)